MUNICIPAL STORM WATER AND URBAN RUNOFF DISCHARGES MANUAL



CITY OF BURBANK COMMUNITY DEVELOPMENT DEPARTMENT

BUILDING DIVISION

PREFACE

This requirement for this Manual was first enacted by the Burbank City Council as a part of Ordinance No. 3552, 'An Ordinance of the Council of the City of Burbank adding Provisions relating to Storm water discharge and Urban Runoff to Chapters 7 and 25 of the Burbank Municipal Code', effective October 10, 2000.

Changes. The California Regional Water Quality Control Board NPDES permit review process may require updates to the 'Standard Urban Storm Water Mitigation Plan (SUSMP)' provisions of this Manual. When adopted by RWQCB, these changes will be incorporated into this Manual.

SUMMARY OF RULES, REGULATIONS, AND POLICIES

City of Burbank Ordinance No. 3552- 'An Ordinance of the Council of the City of Burbank adding Provisions relating to Storm Water Discharge and Urban Runoff to Title 9, Chapter 1, Article 9 and Title 8, Chapter 1, Article 10 of the Burbank Municipal Code'; eff. 10/10/00.

County of Los Angeles Ordinance No. 98-0021, Los Angles County Code, Title 12, Chapter 12.80.

Los Angeles County Urban Runoff and Storm Water NPDES Permit- Standard Urban Storm water Mitigation Plan, California regional Water Quality Control Board, Los Angeles Region; eff. 3/08/00.

USE OF THIS MANUAL

Identification Symbols. [CDD/Bldg] This symbol identifies sections of the manual relating to Building Division policies relevant to storm water.

SUSMP Requirements. SUSMP provisions are post-construction requirements that apply to specific types of projects and to specific activities. SUSMP Best Management Practices must remain in effect for the life of the project and be regularly maintained. Projects that are required to comply with SUSMP regulations must also comply with the construction requirements of Part II. Section 202 of Part I of this Manual identifies those projects and activities that must comply with SUSMP regulations.

Construction Requirements. Construction BMP requirements apply to all construction activity during the actual construction phase of the project, unless specifically listed as exempt. All projects must comply with the provisions of Part II whether or not the provisions of Part I are applicable. Sections 9-1-903, 9-1-904, 9-1-905, and 9-1-906 of Part II of this Manual identify those projects that must comply with these regulations.

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PART I STANDARD URBAN STORM WATER MITIGATION PLAN (SUSMP)

TITLE 8, CHAPTER 1, Burbank Municipal Code Article 10 Stormwater and Runoff Pollution Control

Article 10. STORM WATER AND RUNOFF POLLUTION CONTROL.

Sec. 8-1-1006: ADOPTION OF THE "STANDARD URBAN STORM WATER MITIGATION PLAN FOR LOS ANGELES COUNTY AND CITIES IN LOS ANGELES" ISSUED BY THE REGIONAL WATER QUALITY CONTROL BOARD, LOS ANGELES REGION ON MARCH 8, 2000:6

The "Standard Urban Storm Water Mitigation Plan" ("SUSMP") for Los Angeles County and cities in Los Angeles issued by the Regional Water Quality Control Board, Los Angeles Region on March 8, 2000, and as amended by the December 13, 2001 permit and amended thereafter, is, except as hereinafter provided in this article, hereby adopted, and by this reference made a part of this code with the same force and effect as though set out in full herein. Said SUSMP, is on file and open to public inspection in the Office of the City Clerk. [Added by Ord. No. 3552, eff. 10/10/00; Amended and formerly numbered Section 25-1005 by Ord. No. 3677, eff. 8/20/05.]

Sec. 8-1-1007: AUTHORITY OF DIRECTOR AND BUILDING OFFICIAL TO IMPLEMENT SUSMP:

The Director of Public Works and the Building Official shall make rules and regulations when necessary to interpret the SUSMP fairly. Such rules shall be published and maintained at the Office of the City Clerk. Such rules may include the adoption of a fee to pay for the City's expenses related to the implementation of the SUSMP. If so, such fee shall not be effective until it is set forth in the City's Fee Resolution.

The Building Official has the authority to enter into covenants, on behalf of the City, to assure that proper maintenance of the BMPs which shall be recorded with the Los Angeles County Recorder's Office, and run with the land. Such covenant may require annual self-certification by the developer or other responsible party of compliance with the ongoing maintenance obligations. Such covenant may be released if alternative BMPs have been substituted into the project, or are otherwise no longer necessary. [Added by Ord. 3552. Amended by Ord. No. 3677, eff. 8/20/05.]

Chapter 1 DEFINITIONS

SECTION 101-A

"AUTOMOTIVE SERVICE FACILITIES" means a facility that is categorized in any one of the following Standard Industrial Classifications (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539.

- 5013 Motor Vehicle Supplies and New Parts
 Establishments primarily engaged in the wholesale distribution of motor vehicle supplies, accessories, tools, and equipment, and new motor vehicle parts.
- 5014 Tires and Tubes
 Establishments primarily engaged in the wholesale distribution of tires and tubes for passenger and commercial vehicles.
 - 5541 Gasoline Service Stations
 Gasoline service stations primarily engaged in selling gasoline and lubricating oils.
 These establishments frequently sell other merchandise, such as tires, batteries, and other automobile parts, or perform minor repair work. Gasoline stations combined with other activities, such as grocery stores, convenience stores, or carwashes, are classified according to the primary activity.
- 7532 Top, Body, and Upholstery Repair Shops and Paint Shops
 Establishments primarily engaged in the repair of automotive tops, bodies, and interiors, or automotive painting and refinishing. Also included in this industry are establishments primarily engaged in customizing automobiles, trucks, and vans except on a factory basis.
- 7533 Automotive Exhaust System Repair Shops
 Establishments primarily engaged in the installation, repair, or sale and installation of
 automotive exhaust systems. The sale of mufflers, tail pipes, and catalytic converters
 is considered to be incidental to the installation of these products.
- 7534 Tire Retreading and Repair Shops
 Establishments primarily engaged in repairing and retreading automotive tires.
 Establishments classified here may either retread customers' tires or retread tires for sale or exchange to the user or the trade.
- 7536: Automotive Glass Replacement Shops
 Establishments primarily engaged in the installation, repair, or sales and installation of automotive glass. The sale of the glass is considered incidental to the replacement.
- 7537: Automotive Transmission Repair Shops
 Establishments primarily engaged in the installation, repair, or sales and installation
 of automotive transmissions. The sale of transmissions and related parts is
 considered incidental to the installation or repair of these products.
- 7538: General Automotive Repair Shops
 Establishments primarily engaged in general automotive repair.
- 7539: Automotive Repair Shops, Not Elsewhere Classified Establishments primarily engaged in specialized automotive repair, not elsewhere classified, such as fuel service (carburetor repair), brake relining, front-end and wheel alignment, and radiator repair.

SECTION 102- B

"BEST MANAGEMENT PRACTICE (BMP)" means methods, measures, or practices designed and selected to reduce or eliminate the discharge of pollutants to surface waters from point and nonpoint source discharge including storm water. BMPs include structural and nonstructural controls, and operation and maintenance procedures, which can be applied before, during and/or after pollution producing activities.

SECTION 103-C

"COMMERCIAL DEVELOPMENT" means any development on private land that is not heavy industrial or residential. The category includes, but is not limited to: hospitals, laboratories and other medical facilities, educational institutions, recreational facilities, plant nurseries, multi-apartment buildings, car wash facilities, mini-malls and other business complexes, shopping malls, hotels, office buildings, public warehouses and other light industrial complexes.

SECTION 105-E

"ENVIRONMENTALLY SENSITIVE AREA" means an area "in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which would be easily disturbed or degraded by human activities and developments" (California Public Resources Code § 30107.5). Areas subject to storm water mitigation requirements are: areas designated as an Area of Significant Ecological by the County of Los Angeles (Los Angeles County Significant Areas Study, Los Angeles County Department of Regional Planning (1976) and amendments) or an area designated as a Significant Natural Area by the California Department of Fish and Game's Significant Natural Areas Program, provided that area has been field verified by the Department of Fish and Game; an area listed in the Basin Plan as supporting the "Rare, Threatened, or Endangered Species (RARE)" beneficial use; and an area identified by a Permittee as environmentally sensitive.

SECTION 107- H

"HILLSIDE" means property located in an area with known erosive soil conditions, where the development contemplates grading on any natural slope that is twenty-five percent or greater.

SECTION 108-I

"INFILTRATION" means the downward entry of water into the surface of the soil.

SECTION 110-0

"100,000 SQUARE FOOT COMMERCIAL DEVELOPMENT" means any commercial development that creates at least 100,000 square feet of impermeable area, including parking areas.

SECTION 111-P

"PARKING LOT" means land area or facility for the parking or storage of motor vehicles used for business, commerce, industry, or personal use, with a lot size of 5,000 square feet or more of surface area, or with 25 or more parking spaces.

SECTION 112- R

"REDEVELOPMENT" means a) land disturbing activity that results in the creation, addition, or replacement of 5,000 square feet or more of impervious surface on an already developed site. Where Redevelopment results in an alteration of more than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post development storm water quality control requirements, the entire project must be mitigated.

Where Redevelopment results in an alteration to less than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post development storm water quality control requirements, only the alteration must be mitigated, and not the entire development. b) Redevelopment does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, not does it include emergency construction activities required to immediately protect public health and safety. c) Existing single-family structures are exempt from the Redevelopment requirements.

"RESTAURANT" means a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption. (SIC code 5812, Eating Places).

"RETAIL GASOLINE OUTLET" means any facility engaged in selling gasoline or lubricating oils.

SECTION 113-S

"SOURCE CONTROL BMP" means any schedules of activities, prohibitions of practices, maintenance procedures, managerial practices or operational practices that aim to prevent storm water pollution by reducing the potential for contamination at the source of pollution.

"STORM EVENT" means a rainfall event that produces more than 0.1 inch of precipitation and that, which is separated from the previous storm event by at least 72 hours of dry weather.

"STRUCTURAL BMP" means any structural facility designed and constructed to mitigate the adverse impacts of storm water and urban runoff pollution (e.g. canopy, structural enclosure). The category may include both Treatment Control BMPs and Source Control BMPs.

SECTION 214-T

"TREATMENT" means the application of engineered systems that use physical, chemical, or biological processes to remove pollutants. Such processes include, but are not limited to, filtration, gravity settling, media adsorption, biodegradation, biological uptake, chemical oxidation and UV radiation.

"TREATMENT CONTROL BMP" means any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media adsorption or any other physical, biological, or chemical process.

Chapter 2 TYPES OF PROJECTS

SECTION 201- SCOPE

- **201.1 Scope.** Unless otherwise exempt, all development or redevelopment projects shall meet the minimum Storm Water discharge requirements for the treatment and control of pollutants as established by the California Regional Water Quality Control Board, Los Angeles Region as set forth in this chapter. The SUSMP shall contain a list of Best Management Practices designed to:
 - 1. Effectively prohibit non-storm water discharges, and
 - 2. Reduce the discharge of pollutants from storm water conveyance systems to the Maximum Extent Practicable (MEP)

SECTION 202- PRIORITY PLANNING PROJECTS

- **202.1 Project Categories.** Development and redevelopment project categories for Priority Planning Projects identified as requiring SUSMPs shall include:
 - 1. Single-Family Hillside Residential developments of one acre or more of surface area
 - 2. Housing developments (includes single family homes, multi-family homes, condominium, and apartments) of ten units or more;
 - 3. 100,000 square feet or more impervious surface area industrial/ commercial development;
 - 3. Automotive Service Facilities (SIC 5013, 5014, 5541, 7532 7534 and 7536 7538) [5,000 square feet or more of surface area].
 - 4. Retail Gasoline Outlets [5,000 square feet or more impervious area and with projected Average Daily Traffic (ADT) of 100 or more vehicles]. Subsurface Treatment Control BMPs which may endanger public safety (i.e., create an explosive environment0 are considered not appropriate;
 - 5. Restaurants (SIC 5812) [5,000 square feet or more of surface area];
 - 6. Parking lots 5,000 square feet or more of surface area or with 25 or more parking spaces;
 - 7. Projects located in, adjacent to or discharging directly to an ESA that meet the following threshold conditions:
 - (1) Discharge storm water and urban runoff that is likely to impact a sensitive biological species or habitat; and
 - (2) Create 2.500 square feet or more of impervious surface area:
 - **8.** Redevelopment projects in subject categories that meet Redevelopment thresholds (see Redevelopment definition).
- **202.2 Project Activities.** Development and redevelopment projects not included in the Priority Planning Project Categories, but having the following characteristics or activities shall address the applicable sections of the SUSMP requirements as a part of the project design:
 - 1. Vehicle or equipment fueling areas;
 - 2. Vehicle or equipment maintenance areas, including washing and repair;
 - 3. Commercial or industrial waste handling or storage:
 - 4. Outdoor handling or storage of hazardous materials:
 - 5. Outdoor manufacturing areas;
 - 6. Outdoor food handling or processing;
 - 7. Outdoor animal care, confinement, or slaughter, or
 - 8. Outdoor horticulture activities.

Chapter 3 BEST MANAGEMENT PRACTICES

SECTION 301- SCOPE

301.1 Scope. Post-construction Best Management Practices shall apply to all Priority Planning Projects and shall be required to be installed, functional, and maintained from the time of a certificate of occupancy. The Best Management Practices selected for each development and redevelopment project, not otherwise designated as an Exempt Project, shall be as set forth in Table I and Table II.

SECTION 302-LIMITATIONS ON USE OF INFILTRATION BMPs

- **302.1 Infiltration.** Infiltration shall not be used as a Best Management Practice:
 - 1. Where the water table distance separation from the proposed infiltration BMP is ten feet or less in depth.
 - 2. Unless appropriate pretreatment is provided to ensure groundwater is protected and the infiltration BMP is not rendered ineffective by overload for:
 - a. Areas of industrial activity.
 - b. Areas of high vehicular traffic (25,000 or greater average daily traffic (ADT) on main roadway or 15,000 or more ADT on any intersecting roadway).

SECTION 303- ALTERNATE CERTIFICATION

- **303.1 Alternate Certification.** The Building Official may accept, In lieu of conducting detailed BMP review to verify Structural or Treatment Control BMPs adequacy, a signed certification from a Civil Engineer or a Licensed Architect registered in the State of California trained in BMP design for water quality. The Certification Statement shall include:
 - 1. The name and location of the project.
 - 2. The name and address of the Engineer, Architect, or Landscape Architect.
 - 3. A list of the BMPs.
 - 4. A List of the training and the organization conducting the training. (e.g., a University, American Society of Civil Engineers, American Society of Landscape Architects, American Public Works Association, or the California Water Environment Association may be considered qualifying.)

Chapter 4 GENERAL PROJECT REQUIREMENTS

SECTION 401- PEAK STORM WATER RUNOFF DISCHARGE RATES

401.1 Runoff and Discharge Rates. Post-development peak storm water runoff discharge rates shall not exceed the estimated pre-development rate for developments where the increased peak storm water discharge rate will result in increased potential for downstream erosion.

SECTION 402- CONSERVATION OF NATURAL AREAS

- **402.1 Natural Areas.** Where applicable, the site layout for a Subdivision design, where consistent with General Plan and Local area Plan policies, shall include:
 - 1. Concentration and clustering of developments on portions of a site while leaving the remaining land in a natural, undisturbed condition.
 - 2. Limitations on the clearing and grading of native vegetation at a site to the minimum amount needed to build lots, allow access, and provide fire protection.
 - 3. Maximization of tress and other vegetation at each site by planting additional vegetation, clustering tree areas, and promoting the use of native and/or drought tolerant plants.
 - 4. Promotion of natural vegetation by using parking lot islands and other landscaped areas.
 - 5. Preservation of riparian area and wetlands.

SECTION 403- MINIMIZATION OF POLLUTANTS OF CONCERN

- **403.1 Pollutants of Concern.** A development shall be designed so as to minimize, to the maximum extent practicable, the introduction of pollutants of concern that may result in significant impacts, generated from site runoff of directly connected impervious areas (DCIA), to the storm water conveyance system. Pollutants of concern include, but are not limited to, oil and grease, suspended solids, metals, gasoline, and pesticides, that exhibit one or more of the following characteristics:
 - 1. Current loadings or historic deposits of the pollutant are impacting the beneficial use of a receiving water.
 - 2. Elevated levels of the pollutant are found in sediments of a receiving water.
 - 3. Elevated levels of the pollutant have the potential to bioaccumulate in organisms of a receiving water.
 - 4. The detectable inputs of the pollutant are at concentrations or loads considered potentially toxic to humans and/or flora and fauna.

Minimizing pollutants of concern shall require the incorporation of a BMP or combination of BMPs best suited to maximize the reduction of pollutant loadings in runoff to the maximum extent practicable, as set forth in Table I and Table II.

SECTION 404- PROTECTION OF SLOPES AND CHANNELS

- **404.1 Slopes and Channels.** A development shall be designed so as to decrease the potential of slopes and/or channels from eroding and impacting storm water runoff:
 - 1. Convey runoff safely from the tops of slopes and stabilize disturbed slopes.
 - 2. Utilize natural drainage systems to the maximum extent practicable.
 - 3. Control or reduce or eliminate flow to natural drainage systems to the maximum extent practicable.
 - 4. Stabilize permanent channel crossings.
 - 5. Vegetate slopes with native or drought tolerant vegetation.
 - 6. Install energy dissipaters to minimize erosion.

SECTION 405- STORM DRAIN SYSTEM STENCILING AND SIGNAGE

405.1 General. Storm drain stencils and signs, containing a brief statement that prohibits the dumping of improper materials into the storm water conveyance system, shall be placed directly adjacent to all storm drain inlets and public access points.

405.2 Stencils. The stencils shall:

- a. Use prohibitive language, such as "NO DUMPING- DRAINS TO OCEAN", and/or graphical icons to discourage illegal dumping.
- b. Be legible and properly maintained.

405.3 Signs. The signs shall:

- a. Use prohibitive language and/or graphical icons to discourage illegal dumping.
- b. Be posted at public access points along channels and creeks within the project area.

SECTION 406- OUTDOOR MATERIAL STORAGE AREAS

- **406.1 Outdoor Storage.** Where developments include outdoor areas for storage of materials that may contribute pollutants, such as toxic compounds, oil and grease, heavy metals, nutrients, and suspended solids, to the storm water conveyance system, the following structural or treatment BMPs are required:
 - 1. Materials with the potential to contaminate storm water shall be:
 - Placed in an enclosure such as, but not limited to, a cabinet, shed, or similar structure that prevents contact with runoff or spillage to the storm water conveyance system, or
 - b. Protected by secondary containment structures such as berms, dikes, or curbs.
 - 2. The storage area shall be paved and sufficiently impervious to contain leaks and spills.
 - 3. The storage area shall have a roof or awning to minimize collection of storm water within the secondary containment area.

SECTION 407- TRASH STORAGE AREAS

- **407.1 Trash Storage.** Where trash receptacles or other receptacles are located for use as a repository for solid wastes, the following structural or treatment BMPs are required:
 - Trash containers shall have drainage from adjoining roofs and pavement diverted around the area.
 - 2. Trash container areas shall be screened or walled to prevent off-site transport of trash.

408. BMP MAINTENANCE

When structural or treatment control BMPs are required by other sections of this ordinance, verification of maintenance shall be provided. The verification shall include the developer's signed statement accepting responsibility for BMP maintenance. The maintenance provisions shall be specified in the CEQA mitigation requirements, Conditional Use Permit requirements, Development Review requirements, or as a covenant of agreement.

All transfers of property shall include conditions requiring the recipient to assume responsibility for the maintenance of all BMPs. For residential properties where the BMPs are located within the common area, the maintenance shall be included in the project's conditions, covenants, and restrictions (CC&Rs). The first deed transfer shall include the following information:

- 1. The existence of the requirement,
- 2. The storm water management facilities that are present,
- 3. The required maintenance,
- 4. The City Departmental contacts for additional information.

Standards for Private Drains and Catch Basins: Persons owning or operating drainage facilities that are directly connected to the public storm drain system shall clean those facilities between May 1 and September 30 of each year, and re-clean those facilities, as needed, before their sumps are forty percent full of material. This requirement includes, but is not limited to, catch basins, culverts and parkway drains.

Chapter 5 PROJECT REQUIREMENTS FOR SPECIFIC USE OR OCCUPANCY

SECTION 501- REQUIREMENTS FOR SINGLE-FAMILY HILLSIDE HOMES

501.1 Single-Family Hillside Homes. Single-Family Hillside Homes shall:

- 1. Conserve natural areas:
- 2. Protect slopes and channels:
- 3. Provide storm drain system stenciling and signage;
- 4. Divert roof runoff to vegetated areas before discharge unless the diversion would result in slope instability; and
- Direct surface flow to vegetated areas before discharge unless the diversion would result in slope instability

SECTION 502- REQUIREMENTS FOR 100,000 SQUARE FOOT COMMERCIAL DEVELOPMENTS

502.1 Loading/ Unloading Docks. Loading/ Unloading docks shall:

- 1. Be covered or designed to minimize run-off and run-on of storm water.
- 2. Not be directly connected to storm drains.

502.2 Maintenance Bays. Maintenance Bays shall:

- 1. Be indoors or designed to prohibit storm water runon or contact with storm water runoff.
- Be designed to capture all washwater, leaks and spills in the bay drainage system. All drains shall connect to a sump and shall be prohibited from direct connection to the storm drain system.
- **502.3 Wash Areas**. Vehicle/ Equipment Wash Areas shall be self-contained and/or covered, equipped with a clarifier, or other pretreatment facility, and properly connected to the sanitary sewer.

SECTION 503- REQUIREMENTS FOR RESTAURANTS

503.1 Wash Areas. Equipment/ Accessory Wash Areas shall:

- 1. Be self-contained, equipped with a grease trap, and properly connected to the sanitary sewer.
- 2. Be covered, paved, have secondary containment, and be connected to the sanitary sewer when located outdoors.

SECTION 504- REQUIREMENTS FOR RETAIL GASOLINE OUTLETS

504.1 Fueling Areas. Fueling Areas shall:

- 1. Be covered with an overhanging roof structure or canopy. The minimum dimensions of the canopy shall be equal to or greater than the area within the grade break. The canopy shall not drain onto the fuel dispensing area, and the canopy downspouts shall be routed to prevent drainage across the fueling area.
- 2. Be paved with Portland cement concrete, or equivalent smooth, impervious surface. The use of asphalt concrete shall be prohibited.
- 3. Have a 2% to 4% slope to prevent ponding. The dispensing area shall be separated from the rest of the site by a grade break that prevents run-on of storm water to the extent practicable.
- 4. Extend a minimum of 6.5 feet from the corner of each fuel dispenser, or the length at which the hose and nozzle assembly may be operated plus 1 foot, whichever is less.

SECTION 505- REQUIREMENTS FOR AUTOMOTIVE REPAIR SHOPS

505.1 Fueling Areas. Fueling Areas shall:

1. Be covered with an overhanging roof structure or canopy. The minimum dimensions of the canopy shall be equal to or greater than the area within the grade break. The canopy shall

- not drain onto the fuel dispensing area, and the canopy downspouts shall be routed to prevent drainage across the fueling area.
- 2. Be paved with Portland cement concrete, or equivalent smooth, impervious surface. The use of asphalt concrete shall be prohibited.
- 3. Have a 2% to 4% slope to prevent ponding. The dispensing area shall be separated from the rest of the site by a grade break that prevents run-on of storm water to the extent practicable.
- 4. Extend a minimum of 6.5 feet from the corner of each fuel dispenser, or the length at which the hose and nozzle assembly may be operated plus 1 foot, whichever is less.

505.2 Maintenance Bays. Maintenance Bays shall:

- 1. Be indoors or designed to prohibit storm water runon or contact with storm water runoff.
- 2. Be designed to capture all washwater, leaks and spills in the bay drainage system. All drains shall connect to a sump and shall be prohibited from direct connection to the storm drain system.
- **505.3 Wash Areas.** Vehicle/ Equipment Wash Areas shall be self-contained and/or covered, equipped with a clarifier, or other pretreatment facility, and properly connected to the sanitary sewer.

505.4 Loading/ Unloading Docks. Loading/ Unloading docks shall:

- 1. Be covered or designed to minimize run-off and run-on of storm water.
- 2. Not be directly connected to storm drains.

SECTION 506- REQUIREMENTS FOR PARKING LOTS

506.1 Parking Areas. Parking Areas shall:

- 1. Have reduced impervious land coverage.
- 2. Provide for infiltration of runoff before it reaches the storm drain system.
- 3. Provide for the treatment of runoff before it reaches the storm drain system.

506.2 Maintenance. Parking Areas shall:

- 1. provide treatment to remove oil and petroleum hydrocarbons at parking lots that are heavily used (e.g. fast food outlets, lots with 25 or more parking spaces, sport event parking lots, shopping malls, grocery stores, discount warehouse stores).
- 2. Ensure adequate operation and maintenance of treatment systems, particularly sludge and oil removal, and system fouling and plugging control.

Chapter 6 DESIGN STANDARDS FOR STRUCTURAL AND TREATMENT CONTROL BMPs

SECTION 601- SCOPE

601.1 Scope. Structural or treatment control BMPs for all projects covered by this ordinance shall meet the design standards of this section unless specifically exempted.

Post-construction structural or treatment BMPs shall be designed to:

- A. Mitigate storm water runoff from the volume of runoff produced from a 0.75 inch storm event, prior to its discharge to a storm water conveyance system.
- B. Control peak flow discharge to provide stream channel and over bank flood protection, based on flow design criteria, as specified in Section 602.

Exception:

The following are exempt from the numerical Structural and Treatment Control BMP design standard requirement only:

- 1. Restaurants less than 5,000 square feet of surface area.
- 2. Retail Gasoline Outlets less than 5,000 square feet .
- 3. Automotive Service Facilities of 5,000 square feet or less.

SECTION 602- VOLUME AND FLOW RATE CALCULATIONS

602.1 [CDD/Bldg] **Volume and Flow Rate.** The following equations as developed by the County of Los Angeles Department of Public Works shall be used for all volume and flow rate calculations:

```
A_{l}
                    Impervious Area (Acres)
   A_P =
                    Pervious Area (Acres)
                    Contributing Undeveloped Upstream Area (Acres)
                    Total Area of Development and Contributing Undeveloped Upstream Area
   A_{Total} =
(Acres)
                    (Contributing Undeveloped Upstream Area is an area where storm water runoff from an undeveloped
                    upstream area will flow directly or indirectly to the Post-Construction Best Management Practices
                    (BMPs) proposed for the development. The additional flow shall me included in the flow rate and
                    volume calculations to appropriately size the BMPs.)
                    Developed Runoff Coefficient
                    Undeveloped Runoff Coefficient
                    Rainfall Intensity (Inches/ Hour)
                    Peak Mitigation Flow rate (cfs)
    T_C
                    Time of Concentration (minutes, must be between 5-30 min.)
    V_M =
                    Mitigation Volume (ft<sup>3</sup>)
    A_{Total} =
                    A_I + A_P + A_U
                    [(A<sub>Total</sub>) (% of Development which is Impervious)]
   A_P =
                    A<sub>Total</sub> x % of Development which is Pervious
                    A<sub>Total</sub> x % of Contributing Undeveloped Upstream Area
    C_D =
                    [(0.9) (Imp.)] + [(1.0 - Imp.) C_U], If C_D < C_U, use C_D = C_U
                    (C_D) (I_X) (A_{Total}) (1 \text{ hour/ } 3,600 \text{ seconds}) (1 \text{ ft/ } 12 \text{ inches}) (43,560 \text{ ft}^2/1 \text{ acre})
    Q_{PM} =
                    (C_D) (I_X) (A_{Total}) (1.008333 \text{ ft}^3-hour/ acre-inches-seconds) (10^{-0.507}) ((C_D I_X)^{-0.519}) (Length^{0.483}) (Slope^{-0.135})
    T_C =
    V_M =
                    (0.75 \text{ inches}) [(A_I) (0.9) + (A_P + A_U) (C_U)] (1 \text{ ft/} 12 \text{ inches}) (43,560 \text{ ft}^2 / 1 \text{ acre})
                    (2,722.5 \text{ ft}^3/\text{ acre}) [(A_I) (0.9) + (A_P + A_{II}) (C_{II})]
```

- A. Project Characteristics shall be tabulated and listed on the calculation documents and shall include:
 - 1. A_{Total} (acres)
 - 2. Type of Development (i.e. industrial, residential, etc.)
 - 3. Predominate Soil Type Number
 - 4. Per cent of Project Impervious
 - 5. Per cent of Project Pervious
 - 6. Percent of Project Contributing Undeveloped Area
 - 7. A₁ (acres)
 - 8. A_P (acres)
 - 9. Au (acres)

B. Determination of Peak Mitigated Flow Rate:

- 1. Assume an initial T_C value between 5 and 30 minutes.
- 2. In Table 7-190-III, using the assumed T_C , select the corresponding I_X intensity in inches/hour.
- 3. Determine the value for the Undeveloped Runoff Coefficient (C_U) using the runoff coefficient curve corresponding to the predominant soil type from Appendix D-1 of the LA Hydrology Manual.
- 4. Calculate the Developed Runoff Coefficient (C_D).
- 5. Calculate the value for $C_D I_X$.
- 6. Calculate the time of concentration (T_C) .
- 7. Calculate the difference between the initially assumed $T_{\rm C}$ and the calculated $T_{\rm C}$, if the difference is greater than 0.5 minutes. Use the calculated $T_{\rm C}$ as the assumed initial $T_{\rm C}$ in the second iteration. If the $T_{\rm C}$ value is within 0.5 minutes, round the acceptable $T_{\rm C}$ value to the nearest minute.
- 8. Calculate the Peak Mitigation Flow Rate (Q_{PM)}.

C. Determination of Volume:

To determine the Volume (V_{M}) of storm water runoff to be mitigated from the new development

, use: (2,722.5 ft³/ acre) [(A_I) (0.9) + (A_P + A_U) (C_U)].

TABLE I-A RECOMMENDED BEST MANAGEMENT PRACTICES FOR SITE PLANNING AND POST-CONSTRUCTION

Post-Construction BMPs	
BMP Name	BMP Identification Number & Type
Car Wash Facility	SC3, Vehicle and Equipment Washing and Steam Cleaning
Constructed Wetlands	TC3, Constructed Wetlands
Control of Impervious Runoff	Not Applicable
Efficient Irrigation	Not Applicable
Energy Dissipaters	ESC40, Outlet Protection
Extended Detention Basins	TC5, Extended Detention Basin
Infiltration Basins	TC1, Infiltration
Infiltration Trenches	TC1, Infiltration
Inlet Trash Racks	Not Applicable
Landscape Design	ESC2, Preservation of Existing Vegetation ESC10, Seeding & Planting ESC11, Mulching
Linings for Urban Runoff Conveyance Channels	Not Applicable
Materials Management	SC5, Outdoor Loading/ Unloading of Materials SC6, Outdoor Container Storage of Liquids SC8, Outdoor Storage of Raw Materials, Products, and By-Products
Media Filtration	TC6, Media Filtration
Motor Fuel Concrete Dispensing Areas	SC2, Vehicle & Equipment Fueling
Motor Fuel Dispensing Area Canopy	SC2, Vehicle & Equipment Fueling
Oil/Water Separators and Water Quality Inlets	TC7, Oil/Water Separators & Water Quality Inlets
Outdoor Storage	SC6, Outdoor Container storage of Liquids SC8, Outdoor Storage of Raw Materials, Products and By-Products
Porous Pavement and Alternative Surfaces	TC1, Infiltration
Protect Slopes and Channels	ESC40, Outlet Protection ESC42, Slope Roughening & Terracing
Self-Contained Areas for Vehicle or Equipment washing, Steam Cleaning, Maintenance, Repair, or Material Processing	SC3, Vehicle & Equipment Washing & Steam Cleaning SC4, Vehicle & Equipment Maintenance & Repair SC7, Outdoor Process Equipment Operations & Maintenance
Storm Drain System Stenciling & Signage	SC30, Storm Drain System Signs
Trash Container Areas	SC9, Waste Handling & Disposal
Vegetated Swales & Strips	TC4, Bio-Filters
Wet Pond	TC2, Wet Pond

TABLE I-B RECOMMENDED BEST MANAGEMENT PRACTICES FOR REDEVELOPMENT AND INFILL

BMP Name Car Wash Facility Sc3, Vehicle and Equipment Washing and Steam Cleaning Control of Impervious Runoff Efficient Irrigation Energy Dissipaters Landscape Design Linings for Urban Runoff Conveyance Channels Materials Management Sc5, Outdoor Loading/ Unloading of Materials Sc6, Outdoor Container Storage of Liquids Sc8, Outdoor Storage of Raw Materials, Products, and By-Products Media Filtration Motor Fuel Concrete Dispensing Areas Oil/Water Separators and Water Quality Inlets Outdoor Storage Sc6, Outdoor Container storage of Liquids Sc7, Outdoor Container Storage of Liquids Sc8, Outdoor Storage of Liquids Sc8, Outdoor Storage of Liquids Sc8, Outdoor Storage Tr7, Oil/Water Separators & Water Quality Inlets Sc7, Outdoor Container storage of Liquids Sc8, Outdoor Container storage of Liquids Sc8, Outdoor Storage Sc6, Outdoor Container storage of Liquids Sc8, Outdoor Container storage of Liquids Sc8, Outdoor Container storage of Liquids Sc8, Outdoor Storage of Raw Materials, Products Active Tr7, Infiltration Protect Slopes and Channels ESC40, Outlet Protection ESC42, Slope Roughening & Terracing Sc42, Slope Roughening & Terracing Sc42, Vehicle & Equipment Washing & Steam Cleaning Sc4, Vehicle & Equipment Maintenance & Repair, or Material Processing Sc7, Outdoor Process Equipment Operations & Maintenance Sc7, Waste Handling & Disposal	Redevelopment and Infill BMPs				
Car Wash Facility Control of Impervious Runoff Rot Applicable Efficient Irrigation Energy Dissipaters Landscape Design Landscape Design Linings for Urban Runoff Conveyance Channels Materials Management Materials Management SC5, Outdoor Loading/ Unloading of Materials SC6, Outdoor Container Storage of Liquids SC8, Outdoor Storage of Raw Materials, Products, and By-Products Motor Fuel Concrete Dispensing Areas Motor Fuel Dispensing Area Canopy Oil/Water Separators and Water Quality Inlets Outdoor Storage Cutdoor Storage SC6, Outdoor Container Fueling SC7, Vehicle & Equipment Fueling TC7, Oil/Water Separators & Water Quality Inlets Outdoor Storage SC6, Outdoor Container storage of Liquids SC7, Vehicle & Equipment Fueling TC7, Oil/Water Separators & Water Quality Inlets Outdoor Storage SC6, Outdoor Container storage of Liquids SC8, Outdoor Storage of Raw Materials, Products and By-Products TC7, Oil/Water Separators & Water Quality Inlets Outdoor Storage SC6, Outdoor Container storage of Liquids SC8, Outdoor Storage of Raw Materials, Products and By-Products TC7, Infiltration SC8, Outdoor Storage of Raw Materials, Products And By-Products SC8, Outdoor Storage of Raw Materials, Products And By-Products SC7, Outdoor Storage of Raw Materials, Products And By-Products SC8, Outdoor Storage of Raw Materials, Products And By-Products SC8, Outdoor Storage of Raw Materials, Products And By-Products SC8, Outdoor Storage of Raw Materials, Products And By-Products SC9, Vehicle & Equipment Washing & Steam Cleaning SC9, Vehicle & Equipment Washing & Steam Cleaning SC9, Vehicle & Equipment Maintenance & Repair SC7, Outdoor Process Equipment Operations & Maintenance Storm Drain System Stencilling & Signage SC30, Storm Drain System Signs	BMP Name	BMP Identification Number & Type			
Efficient Irrigation Energy Dissipaters Energy Dissipaters ESC40, Outlet Protection ESC2, Preservation of Existing Vegetation ESC10, Seeding & Planting ESC11, Mulching Linings for Urban Runoff Conveyance Channels Materials Management SC5, Outdoor Loading/ Unloading of Materials SC6, Outdoor Container Storage of Liquids SC8, Outdoor Storage of Raw Materials, Products, and By-Products TC6, Media Filtration Motor Fuel Concrete Dispensing Areas Motor Fuel Dispensing Area Canopy SC2, Vehicle & Equipment Fueling Oil/Water Separators and Water Quality Inlets Outdoor Storage SC6, Outdoor Container storage of Liquids SC7, Vehicle & Equipment Fueling TC7, Oil/Water Separators & Water Quality Inlets SC8, Outdoor Container storage of Liquids SC8, Outdoor Storage of Raw Materials, Products and By-Products TC1, Infiltration TC7, Oil/Water Separators & Water Quality Inlets TC7, Oil/Water Separators & Water Quality Inlets SC8, Outdoor Storage of Raw Materials, Products and By-Products TC1, Infiltration SC24, Slope Roughening & Terracing SC3, Vehicle & Equipment Washing & Steam Cleaning, Maintenance, Repair, or Material Processing Maintenance Storm Drain System Stenciling & Signage SC30, Storm Drain System Signs	Car Wash Facility				
Energy Dissipaters Landscape Design ESC40, Outlet Protection ESC2, Preservation of Existing Vegetation ESC10, Seeding & Planting ESC11, Mulching Linings for Urban Runoff Conveyance Channels Materials Management SC5, Outdoor Loading/ Unloading of Materials SC6, Outdoor Storage of Raw Materials, Products, and By-Products and By-Products TC6, Media Filtration Motor Fuel Concrete Dispensing Areas Motor Fuel Dispensing Area Canopy SC2, Vehicle & Equipment Fueling Motor Fuel Dispensing Area Canopy SC2, Vehicle & Equipment Fueling TC7, Oil/Water Separators & Water Quality Inlets Outdoor Storage SC6, Outdoor Container storage of Liquids SC7, Vehicle & Equipment Fueling TC7, Oil/Water Separators & Water Quality Inlets SC6, Outdoor Container storage of Liquids SC8, Outdoor Storage of Raw Materials, Products and By-Products TC1, Infiltration Porous Pavement and Alternative Surfaces Protect Slopes and Channels ESC40, Outlet Protection ESC42, Slope Roughening & Terracing SC3, Vehicle & Equipment Washing & Steam Cleaning SC4, Vehicle & Equipment Maintenance & Repair, or Material Processing SC7, Outdoor Process Equipment Operations & Maintenance Storm Drain System Stenciling & Signage SC30, Storm Drain System Signs	Control of Impervious Runoff	Not Applicable			
ESC2, Preservation of Existing Vegetation ESC10, Seeding & Planting ESC11, Mulching Linings for Urban Runoff Conveyance Channels Materials Management Materials Management SC5, Outdoor Loading/ Unloading of Materials SC6, Outdoor Container Storage of Liquids SC8, Outdoor Storage of Raw Materials, Products, and By-Products Media Filtration Motor Fuel Concrete Dispensing Areas Motor Fuel Dispensing Area Canopy Oil/Water Separators and Water Quality Inlets Outdoor Storage Outdoor Storage SC6, Outdoor Container Fueling TC7, Oil/Water Separators & Water Quality Inlets Outdoor Storage SC6, Outdoor Container storage of Liquids SC8, Outdoor Storage of Raw Materials, Products and By-Products Porous Pavement and Alternative Surfaces Protect Slopes and Channels Sc6, Outdoor Storage of Raw Materials, Products and By-Products TC1, Infiltration ESC40, Outlet Protection ESC42, Slope Roughening & Terracing SC3, Vehicle & Equipment Washing & Steam Cleaning SC4, Vehicle & Equipment Maintenance & Repair, or Material Processing SC7, Outdoor Process Equipment Operations & Maintenance Storm Drain System Stenciling & Signage SC30, Storm Drain System Signs	Efficient Irrigation	Not Applicable			
ESC10, Seeding & Planting ESC11, Mulching Not Applicable Not Applicable SC5, Outdoor Loading/ Unloading of Materials SC6, Outdoor Storage of Liquids SC8, Outdoor Storage of Raw Materials, Products, and By-Products Media Filtration TC6, Media Filtration Motor Fuel Concrete Dispensing Areas SC2, Vehicle & Equipment Fueling SC2, Vehicle & Equipment Fueling SC3, Outdoor Storage Oil/Water Separators and Water Quality Inlets Outdoor Storage SC6, Outdoor Container storage of Liquids SC8, Outdoor Storage of Raw Materials, Products SC6, Outdoor Container storage of Liquids SC8, Outdoor Storage of Raw Materials, Products And By-Products TC1, Infiltration ESC40, Outlet Protection ESC42, Slope Roughening & Terracing SC4, Vehicle & Equipment Washing & Steam Cleaning SC3, Vehicle & Equipment Washing & Steam Cleaning SC4, Vehicle & Equipment Maintenance & Repair, or Material Processing SC57, Outdoor Process Equipment Operations & Maintenance Storm Drain System Stenciling & Signage SC30, Storm Drain System Signs	Energy Dissipaters				
Channels Materials Management SC5, Outdoor Loading/ Unloading of Materials SC6, Outdoor Container Storage of Liquids SC8, Outdoor Storage of Raw Materials, Products, and By-Products Media Filtration TC6, Media Filtration Motor Fuel Concrete Dispensing Areas SC2, Vehicle & Equipment Fueling Motor Fuel Dispensing Area Canopy Oil/Water Separators and Water Quality Inlets Outdoor Storage SC6, Outdoor Container storage of Liquids SC8, Outdoor Storage of Raw Materials, Products SC8, Outdoor Storage of Raw Materials, Products and By-Products TC1, Infiltration Protect Slopes and Channels SC4, Vehicle & Equipment Washing & Terracing Self-Contained Areas for Vehicle or Equipment washing, Steam Cleaning, Maintenance, Repair, or Material Processing SC4, Vehicle & Equipment Maintenance & Repair, or Material Processing SC5, Outdoor Process Equipment Operations & Maintenance Sc7, Outdoor Process Equipment Operations & Maintenance Sc7, Outdoor Drain System Signs	Landscape Design	ESC10, Seeding & Planting			
SC6, Outdoor Container Storage of Liquids SC8, Outdoor Storage of Raw Materials, Products, and By-Products Media Filtration Motor Fuel Concrete Dispensing Areas Motor Fuel Dispensing Area Canopy Oil/Water Separators and Water Quality Inlets Outdoor Storage Outdoor Storage SC2, Vehicle & Equipment Fueling TC7, Oil/Water Separators & Water Quality Inlets SC6, Outdoor Container storage of Liquids SC8, Outdoor Storage of Raw Materials, Products Protucts and By-Products TC1, Infiltration Protect Slopes and Channels ESC40, Outlet Protection ESC42, Slope Roughening & Terracing Self-Contained Areas for Vehicle or Equipment washing, Steam Cleaning, Maintenance, Repair, or Material Processing SC3, Vehicle & Equipment Washing & Steam Cleaning SC4, Vehicle & Equipment Maintenance & Repair SC7, Outdoor Process Equipment Operations & Maintenance Storm Drain System Stenciling & Signage SC30, Storm Drain System Signs	,				
Media Filtration Motor Fuel Concrete Dispensing Areas Motor Fuel Dispensing Area Canopy Oil/Water Separators and Water Quality Inlets Outdoor Storage Outdoor Storage Counce Porous Pavement and Alternative Surfaces Protect Slopes and Channels Self-Contained Areas for Vehicle or Equipment washing, Steam Cleaning, Maintenance, Repair, or Material Processing Storm Drain System Stenciling & Signage TC6, Media Filtration SC2, Vehicle & Equipment Fueling TC7, Oil/Water Separators & Water Quality Inlets SC8, Outdoor Container storage of Liquids SC8, Outdoor Storage of Raw Materials, Products TC1, Infiltration ESC40, Outlet Protection ESC42, Slope Roughening & Terracing SC3, Vehicle & Equipment Maintenance & Repair SC7, Outdoor Process Equipment Operations & Maintenance SC7, Outdoor Process Equipment Operations & Maintenance SC30, Storm Drain System Signs	Materials Management	SC6, Outdoor Container Storage of Liquids SC8, Outdoor Storage of Raw Materials, Products,			
Motor Fuel Dispensing Area Canopy Oil/Water Separators and Water Quality Inlets Outdoor Storage Outdoor Storage Outdoor Storage SC6, Outdoor Container storage of Liquids SC8, Outdoor Storage of Raw Materials, Products and By-Products TC1, Infiltration Protect Slopes and Channels Self-Contained Areas for Vehicle or Equipment washing, Steam Cleaning, Maintenance, Repair, or Material Processing SC7, Outdoor Process Equipment Maintenance & Repair SC7, Outdoor Process Equipment Operations & Maintenance Storm Drain System Stenciling & Signage SC2, Vehicle & Equipment Fueling TC7, Oil/Water Separators & Water Quality Inlets SC6, Outdoor Container storage of Liquids SC8, Outdoor Storage of Raw Materials, Products and By-Products TC1, Infiltration ESC40, Outlet Protection ESC42, Slope Roughening & Terracing SC3, Vehicle & Equipment Washing & Steam Cleaning SC4, Vehicle & Equipment Maintenance & Repair SC7, Outdoor Process Equipment Operations & Maintenance Storm Drain System Stenciling & Signage	Media Filtration				
Oil/Water Separators and Water Quality Inlets Outdoor Storage Outdoor Storage SC6, Outdoor Container storage of Liquids SC8, Outdoor Storage of Raw Materials, Products and By-Products TC1, Infiltration Protect Slopes and Channels ESC40, Outlet Protection ESC42, Slope Roughening & Terracing Self-Contained Areas for Vehicle or Equipment washing, Steam Cleaning, Maintenance, Repair, or Material Processing SC4, Vehicle & Equipment Washing & Steam Cleaning SC4, Vehicle & Equipment Maintenance & Repair SC7, Outdoor Process Equipment Operations & Maintenance Storm Drain System Stenciling & Signage SC30, Storm Drain System Signs	Motor Fuel Concrete Dispensing Areas				
Outdoor Storage SC6, Outdoor Container storage of Liquids SC8, Outdoor Storage of Raw Materials, Products and By-Products Protect Slopes and Channels Self-Contained Areas for Vehicle or Equipment washing, Steam Cleaning, Maintenance, Repair, or Material Processing Self-Contained Areas for Vehicle or Equipment washing, Steam Cleaning, Maintenance, Repair SC7, Outdoor Process Equipment Operations Maintenance Storm Drain System Stenciling & Signage SC6, Outdoor Container storage of Liquids SC8, Outdoor Storage of Raw Materials, Products TC1, Infiltration ESC40, Outlet Protection ESC42, Slope Roughening & Terracing SC3, Vehicle & Equipment Washing & Steam Cleaning SC4, Vehicle & Equipment Maintenance & Repair SC7, Outdoor Process Equipment Operations Maintenance Storm Drain System Stenciling & Signage	Motor Fuel Dispensing Area Canopy	SC2, Vehicle & Equipment Fueling			
SC8, Outdoor Storage of Raw Materials, Products and By-Products TC1, Infiltration Protect Slopes and Channels Self-Contained Areas for Vehicle or Equipment washing, Steam Cleaning, Maintenance, Repair, or Material Processing Sc4, Vehicle & Equipment Washing & Steam Cleaning SC4, Vehicle & Equipment Maintenance & Repair SC7, Outdoor Process Equipment Operations & Maintenance Storm Drain System Stenciling & Signage SC8, Outdoor Storage of Raw Materials, Products and By-Products TC1, Infiltration ESC40, Outlet Protection ESC42, Slope Roughening & Terracing SC3, Vehicle & Equipment Washing & Steam Cleaning SC4, Vehicle & Equipment Maintenance & Repair SC7, Outdoor Process Equipment Operations & Maintenance Storm Drain System Stenciling & Signage	Oil/Water Separators and Water Quality Inlets				
Protect Slopes and Channels Self-Contained Areas for Vehicle or Equipment washing, Steam Cleaning, Maintenance, Repair, or Material Processing Sc42, Slope Roughening & Terracing SC3, Vehicle & Equipment Washing & Steam Cleaning SC4, Vehicle & Equipment Maintenance & Repair SC7, Outdoor Process Equipment Operations & Maintenance Storm Drain System Stenciling & Signage SC30, Storm Drain System Signs	Outdoor Storage	SC8, Outdoor Storage of Raw Materials, Products			
Self-Contained Areas for Vehicle or Equipment washing, Steam Cleaning, Maintenance, Repair, or Material Processing SC42, Slope Roughening & Terracing SC3, Vehicle & Equipment Washing & Steam Cleaning SC4, Vehicle & Equipment Maintenance & Repair SC7, Outdoor Process Equipment Operations & Maintenance Storm Drain System Stenciling & Signage SC30, Storm Drain System Signs	Porous Pavement and Alternative Surfaces				
washing, Steam Cleaning, Maintenance, Repair, or Material Processing SC4, Vehicle & Equipment Maintenance & Repair SC7, Outdoor Process Equipment Operations & Maintenance Storm Drain System Stenciling & Signage SC30, Storm Drain System Signs	Protect Slopes and Channels	ESC42, Slope Roughening & Terracing			
Repair, or Material Processing SC4, Vehicle & Equipment Maintenance & Repair SC7, Outdoor Process Equipment Operations & Maintenance Storm Drain System Stenciling & Signage SC30, Storm Drain System Signs		SC3, Vehicle & Equipment Washing & Steam			
Sc7, Outdoor Process Equipment Operations & Maintenance Storm Drain System Stenciling & Signage SC30, Storm Drain System Signs		SC4, Vehicle & Equipment Maintenance &			
Storm Drain System Stenciling & Signage SC30, Storm Drain System Signs		SC7, Outdoor Process Equipment Operations &			
	Storm Drain System Stenciling & Signage				
	Trash Container Areas	SC9, Waste Handling & Disposal			

TABLE I-C INTENSITY- DURATION DATA FOR 0.75 INCHES OF RAINFALL FOR ALL RAINFALL ZONES*

Duration, T _C (min)	Rainfall Intensity, I _X (in/hr)	
5	0.447	
6	0.411	
7	0.382	
8	0.359	
9	0.339	
10	0.323	
11	0.309	
12	0.297	
13	0.286	
14	0.276	
15	0.267	
16	0.259	
17	0.252	
18	0.245	
19	0.239	
20	0.233	
21	0.228	
22	0.223	
23	0.218	
24	0.214	
25	0.210	
26	0.206	
27	0.203	
28	0.199	
29	0.196	
30	0.193	

^{1.} Table developed by Los Angeles County Department of Public Works

PART II CONSTRUCTION DEVELOPMENT PROGRAM

Title 9, Chapter 1, Burbank Municipal Code Article 9. Standard Urban Storm Water and Urban Runoff Management Programs.

Article 9. STANDARD URBAN STORM WATER AND URBAN RUNOFF MANAGEMENT PROGRAMS.

Sec. 9-1-9-901: PURPOSE:

Storm water runoff may contain pollutants that are suspended in, or dissolved in, urban and storm water discharges. The sources of the pollutants include most developed properties with the concentrations and types of pollutants varying with land use activities. The aggregate contribution of these individual pollutant discharges can result in significant impairment to the water bodies, oceans, and harbors in Los Angeles County.

To address these storm water pollution issues in development and construction projects, the municipal storm water National Pollutant Discharge Elimination System (NPDES) permit was issued to Los Angeles County and 85 cities by the Los Angeles Regional Water Quality Control Board on July 15, 1996. The requirement for the program was based on Section 402(p) of the Clean Water Act, Section 6217 of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA) and the California Water Code. Storm water discharges from construction activities under the NPDES program are regulated by the Clean Water Act amendments of 1987. The primary objectives established under this program are to:

- A. Effectively prohibit non-storm water discharges, and
- B. Reduce the discharge of pollutants from storm water conveyance systems to the Maximum Extent Practicable (MEP statutory standard).

The purpose of this ordinance is to implement certain provisions in Title 8 Chapter 1, Article 10, pertaining to the implementation of storm water and runoff control through the building and grading permit issuance process. [Added by Ord. No. 3552, eff. 10/10/00; Formerly Numbered 7-1901 and Amended by Ord. No. 3733, eff. 12/21/07.]

Sec. 9-1-9-902: APPLICABILITY:

Unless otherwise designated as an Exempt Project, all projects in conjunction with the issuance of any permits shall meet the minimum storm water discharge requirements established by the United States Environmental Protection Agency, the California State Water Resources Control Board and the California Regional Water Quality Control Board, Los Angeles Region, as set forth in this article. [Added by Ord. No. 3552, eff. 10/10/00; Formerly Numbered 7-1902 and Amended by Ord. No. 3733, eff. 12/21/07.]

Sec. 9-1-9-903: GENERAL CONSTRUCTION PERMIT:

- A. General Construction Permit Required. A *California General Permit for Storm Water Discharges Associated with Construction Activity* (hereinafter referred to as the —General Construction Permit||) shall be required prior to issuance of a building or grading permit for all construction projects where one acre or more of soil is disturbed, or where the project results in the disturbance of less than one acre, but is part of a larger common development that exceeds one acre.
- B. Requirements for building or grading permit. As part of a building or grading permit application, the applicant shall first present to the Building Official:

- A copy of a NPDES permit or a copy of the Notice of Intent for the State
 Construction Activities Storm Water General Permit filed with the State
 Water Resources Control Board (SWRCB), and
- The Waste Discharge Identification (WDID) number issued by the State Water Resources Control Board (SWRCB) or a copy of the NPDES permit, and
- A copy of the Storm Water Pollution Prevention Plan (SWPPP) and the Storm Water Monitoring Plan as required by the State Construction Activities Storm Water General Permit.
- C. Permit availability on site. All persons engaged in construction activity within the City requiring a State General Construction Activities Storm Water permit shall have at the site at all times and available for review during regular business hours copies of the required General Construction Permit submittal documents.
- D. Transfer of Ownership. When transfer of ownership takes place for the entire development or portions of the common plan of development where construction activities are still ongoing, proof of an NOI and a copy of the SWPPP shall be submitted to the Building Official. [Added by Ord. No. 3552, eff. 10/10/00; Formerly Numbered 7-1903 and Amended by Ord. No. 3733, eff. 12/21/07; 3604.]

Sec. 9-1-9-904: CONSTRUCTION PRIORITY PROJECTS:

- A. Definition of Construction Priority Project. A Construction Priority Project is defined as a (1) project disturbing greater than one acre; (2) project in or adjacent to an environmentally sensitive area; or (3) project located in a hillside area.
- B. Requirements for building or grading permit. As part of the building or grading permit application, the applicant shall first present to the Building Official:
 - 1. A local Storm Water Pollution Prevention Plan (SWPPP) covering construction materials and waste management control. Every such SWPPP shall include:
 - a. The name, location, period of construction and a brief description of the project;
 - b. The contact information for the owner and contractor:
 - c. The name, location and description of any environmentally sensitive areas located in or adjacent to the project.
 - d. The major construction materials, wastes, and activities at the project site.
 - e. The best management practices (BMPs) to be used to control pollutant discharges from major construction materials, wastes, and activities.
 - f. A site plan indicating the selection of BMPs and their locations.
 - g. A signed certification statement.
 - 2. An Owner's Certification Statement for Minimum Requirements.
 - 3. A Developer/Contractor Self-Inspection Form.
 - 4. A Wet Weather Erosion Control Plan (WWECP) when construction is to commence not later than 30 days prior to and/or will continue into the rainy season (November 1 through April 15, shall be prepared in addition to the SWPPP. Every such WWERC shall be available 30 days prior to the commencement of construction and shall include:
 - a. a. The name, location, period of construction, and a brief description of the project.
 - b. The contact information for the owner and contractor.
 - c. A site plan indicating the selection of BMPs and their locations.
 - d. A signed certification statement.
 - e. An Owner's Certification Statement for Minimum Requirements.
 - f. A Developer/Contractor Self-Inspection Form.
 - 5. For projects requiring coverage under a statewide general construction storm water permit, proof of a Waste Discharger Identification (WDID) Number for

filing a Notice of Intent (NOI) for permit coverage and a certification that a SWPPP has been prepared by the project developer. A local SWPPP may substitute for the State SWPPP if approved by the Building Official. [Added by Ord. No. 3552, eff. 10/10/00; Formerly Numbered 7-1904 and Amended by Ord. No. 3733, eff. 12/21/07; 3604.]

Sec. 9-1-9-905: OTHER CONSTRUCTION PROJECTS:

To obtain a grading or building permit for all other projects, not otherwise designated as a General Construction Permit, a Construction Priority Project, or an Exempt Project, the permit application shall be accompanied by an *Owner's Certification Statement for Minimum Requirements*. The submittal of such statement shall not exempt any person from complying with all other provisions of this ordinance nor relieve such person from applying the appropriate Best Management Practices as specified in Section 9-1-9-107 during the construction of such project. [Added by Ord. No. 3552, eff. 10/10/00; Formerly Numbered 7-1905 and Amended by Ord. No. 3733, eff. 12/21/07.]

Sec. 9-1-9-906: EXEMPT PROJECTS:

Storm water construction control measures including the minimum BMP requirements shall not be required for the following:

- A. Routine maintenance to maintain original line and grade, hydraulic capacity or original purpose of facility;
- B. Emergency construction activities required to immediately protect public health and safety;
- C. Interior remodeling with no outside exposure of construction materials or construction waste to storm water;
 - D. Mechanical permit work;
 - E. Electrical permit work;
 - F. Sign permit work;
- G. The Building Official may designate other development construction projects exempt provided that there is:
 - 1. No significant soil disturbing activity, and
 - 2. No outside storage or exposure to storm water of construction materials or construction wastes, and
 - 3. No activity that poses greater than a minimal risk of storm water pollution. [Added by Ord. No. 3552, eff. 10/10/00; Formerly Numbered 7-1906 and Amended by Ord. No. 3733, eff. 12/21/07.]

Sec. 9-1-9-907: BEST MANAGEMENT PRACTICES (BMPS):

Best Management Practices shall apply to all construction projects and shall be required from the time of land clearing, demolition or commencement of construction until receipt of a certificate of occupancy. The Best Management Practices selected for each development construction project, not otherwise designated as a project subject to the General Construction Permit, or an Exempt Project, shall be as set forth in the City's Municipal Storm Water and Urban Runoff Discharges Manual.

Construction Priority Project SWPPP and WWECP shall include, at a minimum, the following BMPs:

- A. Sediment Control:
 - 1. At site perimeters,
 - 2. Below significant slopes (1 vertical to 5 horizontal or greater)
 - 3. At interior storm drain inlets
- B. Erosion Control (soil stabilization) on completed disturbed surfaces.

C. General Site Management, and Materials and Waste Management BMPs for all applicable specific construction operations. [Added by Ord. No. 3552, eff. 10/10/00; Formerly Numbered 7-1907 and Amended by Ord. No. 3733, eff. 12/21/07.]

Sec. 9-1-9-908: PERMIT ISSUANCE:

Prior to obtaining a building or grading permit for a Construction Priority Project, the Building Official shall endorse in writing or stamp the applicable Best Management Practices submitted with the permit application APPROVED. Such approved BMPs shall not be changed, modified, or altered without authorizations from the Building Official. All work regulated by this ordinance shall be done in accordance with the approved plans. [Added by Ord. No. 3552, eff. 10/10/00; Formerly Numbered 7-1908 and Amended by Ord. No. 3733, eff. 12/21/07.]

Sec. 9-1-9-909: RETENTION OF DOCUMENTS:

One copy of the approved SWPPP, WWERC, Owner's Certification, and Self-Inspection form shall be kept on the site of the building or work at all times during which the work is in progress. The documents shall be made available to the Building Official to allow verification of compliance with the required Best Management Practices (BMPs). [Added by Ord. No. 3552, eff. 10/10/00; Formerly Numbered 7-1909 and Amended by Ord. No. 3733, eff. 12/21/07.]

Sec. 9-1-9-910: INSPECTIONS:

A. INSPECTIONS BY CITY. Construction or work, not otherwise designated as an Exempt Project, shall be subject to inspection by the Building Official to assess whether the minimum requirements for Construction Development are being achieved and applicable BMPs are being implemented.

Approval as a result of an inspection shall not be construed to be an approval of a violation of this ordinance or of other ordinances of the jurisdiction. Inspections presuming to give authority to violate or cancel the provisions of this ordinance or of other ordinances of the jurisdiction shall not be valid.

- B. INSPECTORS TO NOTIFY BOARD OF VIOLATIONS. The Regional Water Quality Control Board shall be responsible for verifying and enforcing the requirements of the General Construction Permit. When local inspections are conducted at sites covered by the General Construction Permit, the inspector shall document observations of potential violations and provide notification to the Regional Water Quality Control Board of the possible violations and the location of the construction site within two business days of the observed violation.

 Construction or work for which a General Construction Permit has been issued by the State Water Resources Control Board (SWRCB) shall be subject to inspection by the Building Official at least once during the rainy season.
- C. CONSTRUCTION PRIORITY PROJECTS. Inspections shall be conducted by the Building Official to ensure that appropriate controls are in place to reduce pollutants from entering the storm drainage system. Any portions which do not comply with the requirements of this ordinance shall be corrected and follow-up inspections shall confirm that compliance is attained. Construction or work for which a SWPPP OR WWECP has been submitted to the Building Division shall be subject to inspection by the Building Official at least once during the rainy season.
- D. DEVELOPER/ CONTRACTOR SELF-INSPECTIONS. Developer/ Contractor Self-Inspections shall be required for all projects subject to the local SWPPP/ WWECP (also referred to as the Construction Priority Permit) requirements. Self-inspections shall be performed according to the following schedule:
 - 1. Before every rainfall event that is predicted to produce observable runoff.
 - 2. After every rainfall event that produces observable runoff.
 - 3. At 24-hour intervals during extended rainfall events, except weekends and holidays when there is no ongoing site activity.

Every such self-inspection document shall be kept on the site of the building or work at all times during which the work is in progress, and shall include:

- 1. The self-inspection checklist.
- 2. The date, time and conditions of the inspection.

When work is to be conducted during the rainy season or where site conditions may require additional BMP maintenance, additional self-inspections by the Building Official. [Added by Ord. No. 3552, eff. 10/10/00; Formerly Numbered 7-1910 and Amended by Ord. No. 3733, eff. 12/21/07.]

Sec. 9-1-9-911: ENFORCEMENT:

A. GENERAL

In addition to other provisions of the Code, the Building Official is hereby authorized and directed to enforce all the provisions of this ordinance and shall have the power to render interpretations of this ordinance and to adopt and enforce rules and regulations supplemental to this ordinance as may be deemed necessary to clarify the application of the provisions of this ordinance.

B. STOP WORK ORDERS

When work is being done contrary to the provisions of this ordinance, the Building Official may order the work to be corrected or stopped by:

- 1. A Verbal Warning, including:
 - a. A description of the violation.
 - b. A specific time frame for correcting the problem.
 - c. A follow-up inspection date.
- 2. A Written Warning if the noted efficiency has not been corrected. If the violation has been corrected, a written document of compliance shall be attached to the inspection file. The Written Warning shall include:
 - a. The name and location of the project.
 - b. The name and address of the owner and contractor
 - c. A description of the violation.
 - d. A specific time frame for correcting the problem.
 - e. A follow-up inspection date.
- 3. A Stop Work Order if a notice of violation has not been addressed, or if the developer has not complied with the permit requirements, or if a significant threat to water quality is observed.

A Stop Work Order shall prohibit further construction activity until the violation is resolved and authorization to proceed with the work has been granted by the Building Official. The Stop Work Order shall include:

- a. The name and location of the project.
- b. The name and address of the owner and contractor.
- c. A description of the violation.
- d. A description of the corrective action. [Added by Ord. No. 3552, eff. 10/10/00; Formerly Numbered 7-1911 and Amended by Ord. No. 3733, eff. 12/21/07.]

Sec. 9-1-9-912: FEES:

The City may adopt a fee to defray the costs of implementing this ordinance. Such fee, if adopted, shall be specified in the Burbank Fee Resolution. Whenever any work for which a SWPPP or WWECP is required is being done contrary to the provisions of this ordinance and reinspections are required, an investigation fee shall be paid. The investigation fee shall be in the amount set forth in the Burbank Fee Resolution. The payment of such investigation fee shall not exempt any person from complying with all other provisions of this ordinance nor relieve such person from any penalty prescribed by law. [Added by Ord. No. 3552, eff. 10/10/00; Formerly Numbered 7-1912 and Amended by Ord. No. 3733, eff. 12/21/07.]

Sec. 9-1-9-913: ADOPTION OF THE "STANDARD URBAN STORM WATER MITIGATION PLAN FOR LOS ANGELES COUNTY AND CITIES IN LOS ANGELES" ISSUED BY THE REGIONAL WATER QUALITY CONTROL BOARD, LOS ANGELES REGION ON DECEMBER 13, 2001:

The "Standard Urban Storm Water Mitigation Plan" ("SUSMP") for Los Angeles County and Cities in Los Angeles, and as amended, issued by the Regional Water Quality Control Board, Los Angeles Region on December 13, 2001, has been incorporated by reference into Section 8-1-1006. The SUSMP is on file with the City Clerk's Office. No grading or building permit shall be issued for a project subject to the SUSMP requirements until the Building Official approves a storm water mitigation plan that complies with the SUSMP. [Added by Ord. No. 3552, eff. 10/10/00; Formerly Numbered 7-1913 and Amended by Ord. No. 3733, eff. 12/21/07.]

TABLE II-A BEST MANAGEMENT PRACTICES FOR CONSTRUCTION ACTIVITIES

Best N	lanagement Practices	BMP Number*			
Gener	al Site Management	*California Best Management Practices Handbook			
	ruction Practices				
•	Dewatering Operations	CA01			
•	Paving Operations	CA02			
•	Structure Construction & Painting	CA03			
Vehicle	e Equipment & Management				
•	Vehicle & Equipment Cleaning	CA30			
•	Vehicle & Equipment Fueling	CA31			
•	Vehicle & Equipment Maintenance	CA32			
Contra	actor Training				
•	Employee/ Subcontractor Training	CA40			
Const	ruction Materials & Waste Managemen				
	al Management				
- Wickerin	Material Delivery & Storage	CA10			
•	Material Use	CA11			
•	Spill Prevention & Control	CA12			
Waste	Management	5			
•	Solid Waste Management	CA020			
•	Hazardous Waste Management	CA021			
•	Contaminated Soil Management	CA022			
•	Concrete Waste Management	CA023			
•	Sanitary/ Septic Waste Management	CA024			
	on Control	071021			
	anning Considerations				
•	Scheduling	ESC01			
•	Preservation of Existing Vegetation	ESC02			
	ation Stabilization	20002			
v egeta •	Temporary Seeding & Planting	ESC10			
•	Temporary Mulching	ESC11			
	al Stabilization	20011			
1 Hysic	Geotextiles & Mats	ESC20			
•	Dust Control	ESC21			
•	Temporary Stream Crossing	ESC22			
	Construction Road Stabilization	ESC23			
Divers	ion of Runoff	10020			
DIVCIS	Earth Dike	ESC30			
•	Temporary Drains & Swales	ESC31			
•	Slope Drain	ESC32			
	ty Reduction	20032			
2.	Outlet Protection	ESC40			
3.		ESC41			
4.		ESC42			
	ent Control	1 = · -			
5.	Silt Fence	ESC50			
	Straw Bale Barrier	ESC51			
7.		ESC52			
8.		ESC53			
9.		ESC54			
10	. Sediment Trap	ESC55			
	. Sediment Basin	ESC56			
12	. Stabilized Construction Entrance	ESC24			